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AB - J06179644 Prepn. of N-(alpha-alkoxyethyl)formamide (I) is effected by  
reaction of N-(alpha-hydroxyethyl)formamide (II), obtd. by reaction of  
formamide (III) with acetaldehyde in the presence of basic catalyst,  
with prim. or sec. alcohols in the presence of acidic catalyst. (III)  
contains below 1000 ppm diformamide.

- Pref. acetaldehyde contg. less than 300 ppm acetic acid is used.  
Purified (I) is obtd. by distn. of (I) under reduced pressure (max.  
temp. is 70-100 deg.C and the max. pressure is 2-30 mmHg). In the  
prepn. of (II), the salt of strong alkali e.g. hydroxide of alkali  
metal (Li, Na or K etc.) and weak acid e.g. organic acid, phenols or  
sulphurous acid etc., is used as basic catalyst. The catalyst is used  
in an amt. of 0.01-10 (0.1-5) mol% to (III). The mol ratio of (III) :  
acetaldehyde is 1 : 1.0-5.0. The reaction is carried out at (-)10-100  
(0-40) deg.C. The prim. or sec. alcohol e.g. methanol, ethanol, etc.  
is used in an amt. of 1.0-30 times mol to (II). Acidic catalyst e.g.  
H2SO4 or HCl etc. is used in an amt. of 0.001-10 (0.1-5) mol%. The  
reaction is carried out at (-)10-60 (0-40) deg.C.

- USE/ADVANTAGE - (I) is a useful material as an intermediate in the  
prepn. of N-vinylformamide. (I), which has good thermal stability, is  
obtd. in high yield (95-97%).(Dwg.0/0)

CN - 9430-C3801-P

IW - PREPARATION N ALPHA ALKOXYETHYL FORMAMIDE N VINYL FORMAMIDE REACT N  
ALPHA HYDROXYETHYL FORMAMIDE OBTAIN FORMAMIDE ACETALDEHYDE PRIMARY SEC  
ALCOHOL PRESENCE ACIDIC CATALYST

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ALCOHOL PRESENCE ACIDIC CATALYST

NC - 001

OPD - 1992-12-15

ORD - 1994-06-28

PAW - (MITU ) MITSUBISHI KASEI CORP

TI - Prepn. of N-(alpha-alkoxyethyl)-formamide used for N-vinyl- formamide  
- by reacting N-(alpha-hydroxyethyl)-formamide obtd. from formamide  
and acetaldehyde with prim. or sec. alcohol in presence of acidic  
catalyst

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